Santa Clara River Watershed Assessment

Physical State of the River

The Santa Clara River watershed, consisting of approximately 1,634 square miles that drains into the Santa Clara River, contains one of the last remaining natural rivers in Southern California. Nearly 90 percent of the watershed is open space with approximately 88 percent being undeveloped raw land. Roughly two-thirds of the watershed area falls within Los Padres National Forest and Angeles National Forest. These areas are home to the California Condor and other rare and endangered species. The Santa Clara River (River) travels through Los Angeles County and Ventura County. This alluvial river is a high-quality natural resource for much of its length. The approximately 100-mile long River originates in the northern slope of the San Gabriel Mountains in Los Angeles County (County), traverses in a westerly direction towards and through Ventura County, and flows into the Pacific Ocean between the cities of San Buenaventura and Oxnard.

The upper watershed encompasses the City of Santa Clarita (City), communities within unincorporated Los Angles County (Castaic, Stevenson Ranch, West Ranch, Agua Dulcé and Acton), open space areas of the Santa Monica Mountains Conservancy, the Los Angeles County Department of Parks and Recreation, and portions of the Angeles National Forest.

Flows

Surface water quality within the upper watershed is affected by a variety of different discharges from both point and nonpoint sources as well as aerial deposition. Flows within the River, as it passes through the City of Santa Clarita, are predominantly storm water runoff in the wet weather months and water reclamation plant effluent discharges in the drier months. However, ephemeral springs and year round flows still exist in tributaries and natural areas further up stream. Depending on the rainfall season, the upper watershed can have naturally flowing water well into the summer months. Dry season flows tend to percolate into the subsurface flow as it approaches the vicinity of Lang Station Road. The Valencia and Saugus Water Reclamation Plants' effluent tends to percolate into the subsurface near Castaic Creek. These flows resurface further west near Torrey Road. Scientific studies required as part of the Chloride Total Maximum Daily Load (TMDL) aided in determining how surface water and ground water interact in this portion of the River. Sespe Creek in the Ventura County portion of the watershed (near the City of Fillmore) can also contain water flows well into the summer months. The amount of effluent from the Valencia and Saugus Water Reclamation Plants discharged during dry and wet weather is essentially the same, but effluent makes up a higher percentage of the River's flow during drier weather due to lack of rainfall. The flow of effluent from the two treatment plants has also created habitat areas which contain endangered fish and the Southwestern Pond Turtle. Water reclamation plant effluent is the largest and most significant point-source discharge.

Pollution

While urban runoff is a large nonpoint-source of pollution in the Santa Clarita Valley, it is not the most common source of nonpoint-source pollution in the upper watershed. In the more urbanized areas of Santa Clarita, Fillmore, Santa Paula, and Ventura, possible pollutants from nonpoint-sources may include total dissolved solids, suspended solids, oil, grease, nutrients, bacteria, and pesticides. Another large contributor of nonpoint-source pollution in the upper watershed is agricultural runoff. In unincorporated Los Angeles County and rural Ventura County areas there is a significant amount of grazing, orchards, nursery stock, and row-crop agricultural sources. In Ventura County, many of these areas are covered under a Waste Discharge Requirement monitoring program run by the Ventura County Farm Bureau. There is not an equivalent effort in the rural areas of Los Angeles County, however there are significantly less agriculture land uses in that area. Other sources that remain to be assessed are contributions from septic tanks and equestrian uses in portions of Val Verde, Acton, Agua Dulcé and rural areas of Santa Clarita. These areas are not serviced by a water reclamation plant and depend on septic tanks for their sewage treatment needs. Open space areas surrounding the River are teeming with wildlife in the Angeles National Forest and Los Padres National Forest. Coliform bacterium has been found in the River at higher than normal levels, however it is unclear at this point as to which sources are contributing to these bacteria levels. Increased storm flows from recently-burned wildfire areas have also been associated with increased bacteria levels due to bacteria being transported with sediment runoff. A Santa Clara River Total Maximum Daily Load for e-coli in fresh water, and enterococcus in ocean waters, is currently being reviewed by the State Water Resources Control Board. Implementation and monitoring plans to be developed as a result of the Total Maximum Daily Load will likely uncover the primary source(s) of e-coli in the Santa Clara River.

Point Dischargers

Six major point-source dischargers and numerous minor dischargers in the Santa Clara River upper watershed have existing National Pollutant Discharge Elimination System (NPDES) permits. The major dischargers in the Upper Santa Clara River are the Saugus Water Reclamation Plant and Valencia Water Reclamation Plant which service the Santa Clarita Valley. Effluent from these two reclamation plants account for up to 40 percent of total monitored flow within the Upper Santa Clara River during the winter months and 90 percent during summer months. This flow, which tends to move into the subsurface of the River near Castaic Creek and then reappears further west near Piru Creek, is called the “dry gap” phenomenon.

The other four major point-source dischargers are located in Ventura County. This includes the wastewater treatment plants for the communities of Fillmore, Santa Paula, and Piru, and further west, the City of Ventura’s water reclamation plant discharges to the Santa Clara River estuary located near McGrath State Beach.

Minor Discharges

Minor discharges to the Santa Clara River are typically related to dewatering of construction projects and groundwater pumping, and are covered by general construction NPDES permits. The number of minor discharge permits varies in number and duration each year. Conditionally exempt irrigation water (i.e. containing no pesticides, fertilizers, or other pollutants and does not create a nuisance such as algae growth) by residents has proven to be a minor, yet steady, discharge that our inspectors deal with on a consistent basis. During the past several years, land development and construction in the City of Santa Clarita was very slow compared to previous years. The City utilizes both in-house staff and consulting engineering firms that specialize in Standard Urban Stormwater Management Plans (SUSMP) and Storm Water Pollution Prevention Plans (SWPPP) to review plans submitted by developers for their construction projects. The Los Angeles Regional Water Quality Control Board (Regional Board) and the Environmental Protection Agency (EPA) performed a formal review of the development process in Fiscal Year 2009/10. This review gave the City a better understanding of the Regional Board's criteria of a successful stormwater program. City staff has since implemented an improved line of communication with inspectors in the various divisions of the City. In addition, there was a Qualified SWPPP Developer/Practitioner (QSD/QSP) training session held at City Hall with many City staff present. Some of the staff have successfully completed or are in the process of obtaining the QSD/QSP certification.

IRWMP

The City of Santa Clarita is an active participant in the Integrated Regional Watershed Management Plan (IRWMP) for the Upper Santa Clara River watershed. The IRWMP is the product of a collaborative stakeholder process conducted under the direction of the Regional Watershed Management Group (RWMG). The IRWMP provides integration of projects that conserve and protect the natural resources of the Upper Santa Clara River. Other agencies involved with the RWMG include the Rivers and Mountains Conservancy, Castaic Lake Water Agency, Los Angeles County Flood Control District, Newhall County Water District, Santa Clarita Water Division, Santa Clarita Valley Sanitation District of Los Angeles County (SCVSD), and Valencia Water Company. The IRWMP process includes various stakeholders, such as environmental groups, members of local town councils, and local residents.

The purpose of the IRWMP is to integrate planning and implementation efforts and facilitate regional cooperation with the goals of reducing water demand, improving operational efficiency, increasing water supply reliability, improving water quality, and improving resource stewardship. It will also provide ongoing guidance and prioritization regarding implementation projects, for Proposition 50 and Proposition 84 Implementation Grants, as well as other funding sources.

An objective of the IRWMP is to build on a long-standing foundation of cooperation. The intention of the IRWMP is to prevent duplication of existing and ongoing plans, and to better

integrate these efforts and utilize the results and findings of existing plans to put forward the projects needed to address local objectives. The IRWMP complies with and incorporates relevant sections of Proposition 50, Proposition 84, and IRWMP principles and criteria for integrated water management planning as set forth in guidelines for these propositions.

The City also participates in the Santa Clara River Committee of Watershed Coalition of the Ventura County IRWMP. This allows the City to understand and participate in the processes that are occurring in the lower watershed, to better correlate ongoing efforts in all reaches of the watershed, and to verify that the intent of preservation and protecting the entire watershed is coordinated between both IRWMP groups.

Collaborative Efforts

The City of Santa Clarita is the one incorporated community within the upper watershed located in the County of Los Angeles. The City of Santa Clarita's General Plan, the County of Los Angeles General Plan, and the Santa Clarita Valley Area Plan control land use across the watershed. Within the confines of these agreements and restrictions, the City and the County determine their own land uses through the traditionally required General Plan and Zoning and Development Ordinances.

Contained within the individual General Plans of the County and City are policies or programs that govern the decision-making of that entity as to how they review and condition individual development projects and formulate their future improvements. Water management has generally been included in the area of "Open Space and Conservation". In addition to the authority vested in public land-use planning agencies, water agencies also adopt policies and programs which can influence land use. The IRWMP has created an inventory of water-related policies and programs that will be used in order to assist each jurisdiction in their planning relative to what water management efforts they wish to undertake.

One Valley, One Vision is a joint effort between the County of Los Angeles, the City of Santa Clarita, and Santa Clarita Valley residents and businesses to create a single vision and guidelines for the Valley's future growth and preservation of its natural resources. The result of this project will be a 20-plus year General Plan document and Environmental Impact Report (EIR) for the entire Santa Clarita Valley Planning Area, which includes the Los Angeles County communities of Stevenson Ranch, Castaic, Val Verde, Agua Dulcé, and future Newhall Ranch, and the City of Santa Clarita. This project will result in greater cooperation between the County and the City, better planning for resource management, and an enhanced quality of life for all who live and work in the Santa Clarita Valley. The City's planning process for this project was completed this fiscal year with the exception of the Climate Action Plan and related Environmental Impact Report.

The City had participated in a watershed-wide monitoring program sponsored by the SCVSD. This effort is focused on collecting information from various entities performing water quality

monitoring in the upper and lower watershed to distribute monitoring responsibilities in such a manner that will provide for more coverage and less duplication of efforts across agencies. The outcome is expected to be better and more efficient monitoring of the watershed as a whole. The process has languished this year, but the participants have not cancelled the program. The City will continue to participate if and when the process resumes.

The upper Santa Clara River Watershed IRWMP and the Watershed Coalition of Ventura County is meeting three times each year to discuss the River. This effort brings river-wide topics to discuss, and helps facilitate coordination and avoid duplication.

This year, the Weed Management Areas of Los Angeles County and Ventura County, as well as invasive weeds removal advocates and practitioners, have been working together. The effort is called the Santa Clara River Invasive Weeds Task Force. The group meets quarterly and is working to improve the overall habitat health of the Santa Clara River.

TMDLs

Pursuant to the Clean Water Act, portions of the Santa Clara River have been included on the 303(d) List of impaired water bodies and as a result, TMDLs have been, or will be, established for various reaches of the River and the estuary. The TMDLs currently implemented are Chloride and Nitrogen and Effects. The Regional Board adopted the Bacteria TMDL in July 2010. The State Water Resources Control Board is currently reviewing the TMDL. It is anticipated in Spring 2012, the federal government will complete the approval process. Cities and counties within the Santa Clara River watershed have began meetings this year to discuss coordination efforts for and monitoring plans to determine where the sources of bacteria originate so an implementation plan can be developed.

As stated in the Staff Report for the Nitrogen and Effects TMDL, the principal source of ammonia, nitrite, and nitrate to the Santa Clara River was determined to be the result of discharges from water reclamation plants. Nitrite and nitrate can cause or contribute to eutrophic effects, such as low-dissolved oxygen and algae growth. Water quality models were used to demonstrate that the major point sources were the primary contributors of the nitrogen compound loads as compared to the nonpoint sources. Agriculture runoff and aerial deposition, not urban runoff, is the primary nonpoint source of the pollution load. A Basin Plan Amendment for a TMDL with an accompanying Implementation Plan to reduce nitrogen compounds in the Santa Clara River was filed in June 2003.

In May 2004, a Chloride TMDL was adopted by the Regional Board and became effective in May 2005, citing the Valencia and Saugus Water Reclamation Plants located in the City of Santa Clarita as the principal sources of chloride contamination in the Santa Clara River. Studies were conducted by the SCVSD to determine the possible sources of chloride entering the water reclamation plants. The potable water supply and the discharge of salty-brine from residents who have self-regenerating water softeners were determined to be a significant contributor of chloride

to the sewer system. In an effort to stop the contamination at its source, local Ordinances were passed by the SCVSD to prevent the installation of new self-regenerating water softeners in the Santa Clarita Valley shortly after State law allowed for such an Ordinance.

A stakeholder process was created to answer the many questions in the Chloride TMDL for the Upper Santa Clara River. This collaborative process was developed to implement the studies required by the Chloride TMDL. These studies included Agricultural Chloride Threshold Study, Groundwater Surface Water Interaction Model, the Endangered Species Study, Site Specific Objectives, and Anti-Degradation Analysis.

Further, a public outreach campaign was launched in March 2004, aimed at current owners of self-regenerating water softeners, encouraging them to stop using these systems altogether or switch to a different system. This public outreach effort gained momentum with the television commercials on local cable channels campaigning to stop using these types of water softeners, a website dedicated to the chloride issue in the Santa Clarita Valley (www.lacsd.org/chloride), and a toll-free hotline (877) CUT-SALT.

The City supported Senate Bill 475, authored by Senator George Runner, and signed into law in 2006. This Bill allowed the SCVSD to adopt, upon voter approval, an Ordinance that required the removal of residential salt-based water softeners that discharge chloride into the wastewater treatment plants and, ultimately, the Santa Clara River. The SCVSD implemented SB 475, which took effect January 1, 2007. To date, over 7300 automatic water softeners have been removed from the Santa Clarita Valley as a result of this program. The removal of these softeners has reduced chloride levels by over 50 milligrams per liter (mg/L). The City and Sanitation District continue to work together with the Regional Board to address this TMDL.

Conclusion

The challenge with the Santa Clara River watershed is maintaining the balance of population growth, beneficial agricultural use of the River, preservation of endangered species habitat (i.e. red-legged frog, three-spined stickleback), floodplain management, water supply and wildlife corridors that depend on the River and its floodplain. Future stakeholder processes will seek to help define and balance these watershed issues. The NPDES permit process contributes to improving water quality and assessing the status of the beneficial uses. Many agencies, including the City and community members, have great interest in the sustainability of one of the last natural rivers in Southern California.